

Applicant: Erkki Kirveskari
Application No.: 10/561,030
Response to Office action mailed Jun. 3, 2008
Response filed July 9, 2008

Claim Listing

1-12. (cancelled)

13. (currently amended) A method for calendering a paper or paperboard web, comprising the steps of:

calendering the web in a calender in ~~wherein the web is first led into a calendering~~
step, followed by and then into

reeling the web in a reeling step;[[,]] and

~~wherein the edge areas of the web are calendered separately from the rest of the web,~~
and wherein at least one edge area of the web is calendered in the reeling step
separately from a remaining portion of the web.

14. (previously presented) The method according to claim 13, wherein the calendering of the edge areas of the web takes place in at least one calendering nip formed by a means guiding the web onto a roll, such as a reeling cylinder and a calendering roll.

15. (previously presented) The method according to claim 13, wherein two calendering nips are provided, one for each edge area of the web.

16. (previously presented) The method according to claim 15, wherein the calendering nips are placed on substantially the same straight line intersecting the width of the web in the transverse direction, and that the calendering of both edge areas of the web takes place substantially simultaneously at both edges of the web.

17. (previously presented) The method according to claim 13, wherein the length of the calendering roll in its axial direction is at least equal to the width of said edge area of the web.

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18. (currently amended) A device for calendering a paper or paperboard web[[,]]
~~comprising; in which the web is first led into~~
~~a calender[[ing]]; step and then into~~
~~a reel-up; and~~ reeling step, ~~and which device comprises~~
~~means for calendering the edge areas of the web separately from the rest of the web,~~
~~wherein the means for calendering at least one edge area of the web~~ separately from a
remaining portion of the web ~~are provided in the reel-up~~ reeling step.

19. (previously presented) The device according to claim 18, wherein the means for calendering the edge areas of the web comprise a means for guiding the web onto a roll, such as a reeling cylinder and at least one calendering roll, which form at least one calendering nip.

20. (previously presented) The device according to claim 18, wherein it comprises two calendering nips, one for each edge area of the web (W).

21. (previously presented) The device according to claim 20, wherein the calendering nips are placed on substantially the same straight line intersecting the width of the web in the transverse direction, and that both edge areas of the web are calendered substantially simultaneously.

22. (previously presented) The device according to claim 18, wherein the length of the calendering roll in its axial direction is at least equal to the width of the edge area of the web at said edge.

23. (previously presented) The device according to claim 18, wherein the shell of the calendering roll is substantially cylindrical.

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24. (previously presented) The device according to claim 18, wherein the shell of the calendering roll is substantially conical.

25. (previously presented) A device for calendering a paper or paperboard web comprising:

a calender;

a reel-up positioned in web receiving relation with respect to the calender,

a machine reel in the reel-up, wherein the reel-up has at least one roll forming a nip

with the machine reel, the at least one roll arranged to guide the web on to the machine reel and the web extending over said at least one roll;

wherein the web extending over said at least one roll has portions forming a first web edge and portions forming a second web edge, the first web edge and the second web edge defining therebetween a web center line;

at least one edge calendering roll forming a nip with said at least one roll, through which the portion of the web forming the first web edge extends; and

wherein the at least one edge calendering roll extends from a position between the web center line and the first edge to at least the first web edge.

26. (previously presented) The device of claim 25, further comprising a wire or belt loop arranged to guide the web to the web roll, and wherein the at least one roll guides the wire or belt loop to pass through the nip which the at least one roll forms with the web roll.

27. (previously presented) The device of claim 25 wherein the at least one roll forming a nip with the web roll is a reeling cylinder having a rotatable surface forming the nip with the web roll, and wherein the reeling cylinder is equipped with a center drive.

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28. (previously presented) The device of claim 25 further comprising a second edge calendering roll which forms a nip with said at least one roll, through which the portion of the web forming the second web edge extends.

29. (previously presented) The device of claim 27 wherein the at least one edge calendering roll has a conical shape having an end with a larger diameter and an end with a smaller diameter, and wherein the least one edge calendering roll is pressed against the web on the reeling cylinder so that the end of the roll with the larger diameter extends beyond the first edge of the web and rests in driving relation against the rotatable surface of the reeling cylinder.

30. (previously presented) The device of claim 27 wherein the at least one edge calendering roll is mounted for free rotation and wherein an actuator is arranged to press the at least one edge calendering roll against the reeling cylinder.

31. (previously presented) The device of claim 25 wherein the calender has at least one nip formed between a hard-faced heated thermo roll and a soft-faced polymer roll.

32. (previously presented) The device of claim 28, wherein the first edge calendering roll and second edge calendering roll nips are placed on substantially a straight line perpendicular to the center line so that both the first web edge and the second web edge are calendered substantially simultaneously.

33. (previously presented) The device of claim 25, wherein the at least one edge calendering roll is substantially cylindrical.